DOCUMENT RESUME

ED 400 417 CE 072 758

TITLE	Career Pathways Idaho. Moving to a Focused Education.
INSTITUTION	Idaho State Div. of Vocational Education, Boise.
PUB DATE	96
NOTE	19p.
PUB TYPE	Guides - Non-Classroom Use (055)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Career Choice; Career Counseling; *Career Development; *Career Education; Career Guidance; High Schools; Occupational Aspiration; *Occupational Clusters; *Occupational Information; Student Educational Objectives
IDENTIFIERS	*Idaho

ABSTRACT

This booklet is designed to help high school educators explore using career pathways as a meaningful organizational tool for schools and students. The guide begins with a discussion of career pathways within which students choose or design a career major and the effect of career pathways on schools and students. This discussion covers integration of academic and vocational programs, relationship of education to work, and the need for advanced education. Next is a list of six suggested career pathways that are based on Idaho's Career Information System (CIS) occupational data: arts and communications; business and management; health services; human resources; industrial and engineering; and natural resources. Each career pathway is then described in terms of types of general and specific programs that may be included. Recommended courses for the career pathway are listed. A sample educational plan is provided that shows how a student working within that pathway can use the information to select courses for a chosen career goal. Finally, the CIS occupational titles are organized into the six career pathways by level of education required. (YLB)

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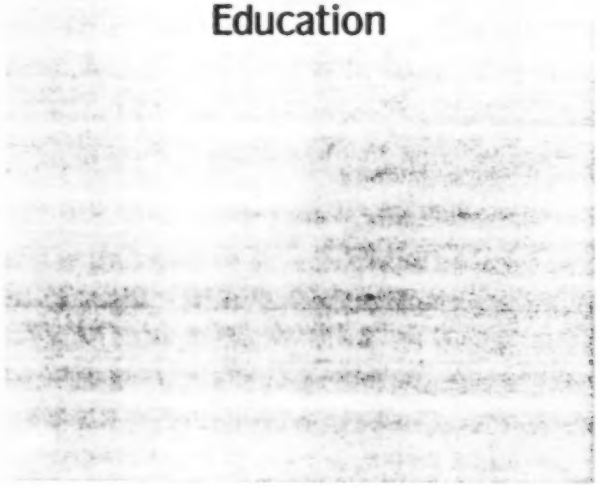
CAREER PATHWAYS

IDAHO

Moving to a Focused Education



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Exploring Career Pathways

We wrote this booklet to help you explore using career pathways as a meaningful organizational tool for schools and students. Pathways move schools from unfocused tracks of education to broad avenues that help in the organization of teachers and courses. They also help students and parents make appropriate choices as to the courses and educational opportunities that will lead to success.

This guide begins with a discussion of career pathways and their effect on schools and students. Next is a list of six suggested career pathways that are based on Idaho's Career Information System (CIS) occupational titles. We explore how your high school might use the pathway concept to organize courses and provide a sample of how a student might use that organization and information to select courses. Finally, the CIS occupational titles are organized into the six career pathways.

Organizing educational programs around pathways gives schools the structure to advise and provide meaningful opportunities for all students. Regardless of Career Pathway(s) chosen or elective courses taken, students must meet state Board of Education requirements.

If we can help you in getting started with career pathways, please contact:

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Students and young adults need to learn about themselves, to have a sense of the world of work, and to set tentative well-informed life and work goals. How can principals and parents help them?

- Gabnelle Wacker

CAREER PATHWAYS

Career pathways provide school personnel, parents, and students with a new way to look at preparing for the work force and further education. Pathways show the integration of academic and vocational courses, the relationship of school to careers, and the need for further education.

Within each career pathway, students choose or design a career major. Career majors include course work that prepares students to: (1) enter directly into the work force; (2) continue education focused on one- to three-year technical degrees; or (3) pursue baccalaureate degrees. Every student follows an educational plan for their career major.

Students must receive strong career guidance so they can choose a pathway and develop an educational plan. The intent is not for students to decide on a specific occupation for the rest of their lives, but to have them choose a pathway into which they can begin to direct their energies.

Career pathways make it easier for teachers to work across disciplines

Integration of Academic and Vocational Programs

Career pathways help facilitate integrated curricula. They require both vocational and academic competencies related to occupations. For example, in the Health Services area, students need the academic competencies contained in anatomy and physiology and vocational competencies contained in medical terminology and emergency procedures.

Career pathways help to integrate the curriculum by allowing teachers to work within their own departments and across disciplines to design courses that meet the needs of students. Each career pathway provides teachers a framework for developing and coordinating an integrated curriculum. Material being taught is reinforced in different classes at appropriate times. For example, chemistry teachers can use the laboratory to demonstrate why infection occurs. Health Occupation teachers teach the applications of infection prevention principles when students learn the basic procedures to prevent infection in the Health Occupations program.

Relationship of Education to Work

Career pathways help students, parents, teachers, and counselors see the relationship of education to the world of work. Whether pursuing a four-year degree, a two-year degree or on-the-job training, students follow a career pathway. Each pathway leads to many occupations and suggests the related education and training necessary to prepare for those occupations.

Career pathways help college preparatory students make relevant course selections. A student wishing to become an engineer chooses the Industrial and Engineering career pathway. Students will take courses to meet college admission requirements. In addition, this pathway allows the engineering student to take courses in computer assisted design, advanced mathematics, and other technical courses beyond college entrance requirements. A student pursuing a career in journalism takes courses available in the Arts & Communications career pathway. All students will master the basic skills required to be successful regardless which career pathway they choose.

In a pathway, students do not wander through school picking courses based on what is easy or what their friends are taking.

Many occupations require work experience before one is considered fully prepared. Work-based learning activities may be (1) exploratory such as job shadowing, short term work experiences and community service, or (2) concentrated technical training such as cooperative education, supervised occupational experience, clinical experiences, school-based enterprises, and individualized occupational training programs. When these activities are incorporated into the curriculum, they complement classroom training by providing related experiences in the world of work.

Each community offers a variety of work-based learning opportunities to meet the career needs and abilities of all young people. Successful work-based learning experiences include:

- Careful planning of what young people will learn and how they will learn it
- Competent supervision, coaching, and mentoring by adults
- Evaluation and documentation of learning
- Opportunities at school and at work for thoughtful reflection on what has happened and what it means
- Multiple connections between school-based and work-based learning
- Work experiences related to the chosen career pathway
- School credit granted for work-based learning
- Parents knowledgeable about both school and work
- Work-sites free of bias and stereotyping

The Need for Advanced Education

Career pathways show the need for and importance of advanced education and training when preparing for the world of work. Pathways not only show the occupations but the corresponding education and training needed to prepare for those occupations. As students move along the pathway, they encounter occupations requiring increased knowledge and skill.

The following pages give examples of six Career Pathways and how schools might organize courses. Each page has suggested courses for a Career Pathway and an example of an individual student's educational plan.

Idaho's Career Pathways

Arts and Communications Career Pathway

The Arts and Communications career pathway includes programs related to the humanities and to the performing, visual, literary, and media arts. These include architecture, creative writing, film and cinema studies, fine arts, graphic design and production, journalism, foreign languages, radio and television broadcasting, advertising, and public relations.

Business and Management Career Pathway

The Business and Management career pathway includes programs related to the business environment. These may include entrepreneurship, sales, marketing, hospitality and tourism, computer/information systems, finance, accounting, personnel, economics, and management.

Health Services Career Pathway

The Health Services career pathway includes programs related to the promotion of health as well as the treatment of injuries, conditions, and disease. These may include medicine, dentistry, nursing, therapy and rehabilitation, nutrition, fitness, and hygiene.

Human Resources Career Pathway

The Human Resources career pathway includes programs related to economic, political, and social systems. These may include education, law and legal studies, law enforcement, public administration, child and family services, religion, and social services.

Industrial and Engineering Career Pathway

The Industrial and Engineering career pathway includes programs related to the technologies necessary to design, develop, install, or maintain physical systems. These may include engineering and related technologies, mechanics and repair, manufacturing and design technology, precision production, electronics, and construction.

Natural Resources Career Pathway

The Natural Resources career pathway includes programs related to the environment and natural resources. These may include agriculture, earth sciences, environmental sciences, fisheries management, forestry, horticulture, and wildlife management.

Arts and Communications

Career Pathway

The Arts and Communications career pathway includes programs related to the humanities and to the performing, visual, literary, and media arts. These include architecture, creative writing, film and cinema studies, fine arts, graphic design and production, journalism, foreign languages, radio and television broadcasting, advertising, and public relations.

Recommended Courses for the Arts and Communications Pathway

- **Keyboarding/Intro to Computers** -Recommended for all career pathways
- **English** - Creative Writing, Literature, Journalism, Applied English
- **Math** - Applied Math 1 & 2, Algebra 2; or Algebra 1, Geometry, Algebra 2; Advanced Math Course
- **Science** - Anatomy, Biology, Botany, Chemistry, Applied Physics
- **Required Courses** - U.S. History, American Government, Economics, Humanities, Physical Education, Health, Speech, Reading
- **Humanities** - Art, Photography, Drawing & Painting, Graphic Design, Ceramics & Jewelry
- **Foreign Language** - French, German, Spanish, Japanese, Latin
- **Fine Arts** - Theater Arts, Humanities
- **Music** - Band, Choir, Music
- **Business/Marketing** - Computers, Accounting, Business Law, Financial Management
- **Family and Consumer Sciences** - Apparel & Housing, Teen Living, Adult Living, Career & Personal Development, Fashion Merchandising
- **Agriculture** - Landscaping, Horticulture
- **Technology** - Computer Aided Drafting, Communication Technology, Printing and Graphic Arts
- **Work-based Learning** - Community opportunities in the arts or graphic communications

(The above courses are examples of what high schools might offer to students within pathways. This listing does not include all required courses. Students must complete all State Board of Education graduation requirements).

■ Working within one or more career pathways, students can develop an educational plan. **Here is one example.**

Teachers organize themselves into pathways instead of just discipline departments.

Identifying a career pathway can help students select courses, activities, and part-time employment.

Career Goal — Graphic Design

Year 9:	Year 10:
Career and Personal Development	Drafting/CAD
English I	Technical Writing
Reading & Speech	Applied Math II
Art I	Art II
Principles of Technology	Health/Physical Education
Applied Math I	Social Studies
Year 11:	**Year 12:**
Algebra II	Printing/Graphics
Biology	Journalism/Literature
Creative Writing	Foreign Language
Foreign Language	Photography
Graphic Design	American Government
US History	Media Production

Plans Beyond High School -- Graphic Design course of study

Business and Management

Career Pathway

The Business and Management career pathway includes programs related to the business environment. These may include entrepreneurship, sales, marketing, hospitality and tourism, computer/information systems, finance, accounting, personnel, economics, and management.

Recommended courses in the Business and Management Pathway

- **Keyboarding/Intro to Computers** - Recommended for all career pathways
- **English** - Creative Writing, Literature, Journalism, Business Writing, Applied English
- **Math** - Applied Math 1 & 2; Algebra 2; or Algebra 1, Geometry, Algebra 2; Business Math
- **Science** - Anatomy, Biology, Botany, Chemistry, Applied Physics
- **Required Courses** - U.S. History, American Government, Economics, Humanities, Physical Education, Health, Speech, Reading
- **Business** - Computers, Accounting, Business Law, Financial Management
- **Marketing/Management** - Marketing, Business Management
- **Family and Consumer Sciences** - Food Service and Hospitality Management, Career & Personal Development, Personal & Family Finance/Consumer Economics
- **Agriculture** - Agricultural Business and Leadership
- **Work-based Learning** - Cooperative Education and Internships in the areas of Business or Marketing

(The above courses are examples of what high schools might offer to students within pathways. This listing does not include all required courses. Students must complete all State Board of Education graduation requirements).

■ Working within one or more career pathways, students can develop an educational plan. **Here is one example.**

Career Goal —Accounting

Year 9:	**Year 10:**
Computer Applications	Business Computer Applications
Algebra I	Biology or App. Biology/Chemistry
Earth Science	English II
English I	Humanities Elective
Reading & Speech	Health & Physical Education
Communication Technology	Geometry
Year 11:	**Year 12:**
Computerized Accounting	Business Technology
Algebra II	Chemistry or Physics
Principles of Technology	Applied English
Economics	American Government
English III	Cooperative Education
US History	

Plans Beyond High School: Accounting degree course of study

Students may want to select more than one pathway. For example, a student interested in hospital administration may wish to select courses from both the Business Management and Health Services pathways.

Teachers and administrators can advise students within a pathway. By having teachers and students select a career pathway, teachers can become knowledgeable about careers and help students and parents to develop an educational plan.

Health Services

Career Pathway

The Health Services career pathway includes programs related to the promotion of health as well as the treatment of injuries, conditions, and disease. These may include medicine, dentistry, nursing, therapy and rehabilitation, nutrition, fitness, and hygiene.

Recommended courses for the Health Services Career Pathway

- **Keyboarding/Intro to Computers** - Recommended for all career pathways
- **English** - Creative Writing, Literature, Journalism, Technical Writing
- **Math** - Applied Math 1 & 2, Algebra 2; or Algebra 1, Geometry, Algebra 2; Advanced Math Course
- **Science** - Applied Biology and Chemistry, Principles of Technology, Anatomy and Physiology
- **Required Courses** - U.S. History, American Government, Economics, Humanities, Physical Education, Health, Speech, Reading
- **Social Studies** - Sociology, Psychology
- **Health Occupations** - Health Occupations 1, Health Occupations 2
- **Family and Consumer Sciences** - Nutrition & Foods, Family Health & Wellness, Food Science, Career & Personal Development
- **Physical Education** - First Aid
- **Work-based Learning** - Clinical Experiences in the Health Field

(The above courses are examples of what high schools might offer to students within pathways. This listing does not include all required courses. Students must complete all State Board of Education graduation requirements).

■ Working within one or more career pathways, students can develop an educational plan. **Here is one example.**

Career Goal — Nurse

Year 9:	**Year 10:**
Applied Math I	Exploratory Careers/Health Occupations
Earth Science	Applied Math II
English I	Biology or Applied Biology & Chem.
Reading & Speech	English II
Humanities Elective	Reading & Speech
Economics	Health & Physical Education
Year 11:	**Year 12:**
Health Occupations I	Health Occupations II
Algebra II	Chemistry
Principles of Tech.	Applied English
English III	Humanities Elective
US History	American Government
Sociology	Psychology

Plans Beyond High School -- Health Occupations course of study

By discovering students' dependable strengths, students and parents are able to make informed choices about education.

Printing course offerings by career pathways begins the process of making connections among courses, and between schools and the world of work.

Human Resources

Career Pathway

The Human Resources career pathway includes programs related to economic, political, and social systems. These may include education, law and legal studies, law enforcement, public administration, child and family services, religion, and social services.

When school personnel return to industry, they often find how important what they are teaching is to the success of students when those students enter the world of work. Having teachers return to an industry in their pathway is an excellent inservice activity.

Recommended Courses for the Human Resources Pathway

- **Keyboarding/Introduction to Computers** - Recommended for all career pathways
- **English** - Creative Writing, Literature, Journalism, Applied English
- **Math** - Applied Math 1 & 2, Algebra 2; or Algebra 1, Geometry, Algebra 2, Advanced Math Course
- **Science** - Applied Biology and Chemistry, Principles of Technology, Anatomy and Physiology
- **Required Courses** - U.S. History, American Government, Economics, Humanities, Physical Education, Health, Speech, Reading
- **Family and Consumer Sciences** - Child Development, Food Service & Hospitality Management, Occupational Child & Adult Care, Apparel & Housing, Nutrition & Foods, Teen Living, Adult Living, Career & Personal Development, Personal & Family Finance/Consumer Economics, Family Health & Wellness
- **Health Occupations** - Health Occupations 1, Health Occupations 2
- **Humanities** - Art, Photography, Drawing & Painting, Graphic Design, Ceramics & Jewelry
- **Social Studies** - Psychology, History, Government, Geography
- **Work-based Learning** - Cooperative Education in the Field of Human Services

(The above courses are examples of what high schools might offer to students within pathways. This listing does not include all required courses. Students must complete all State Board of Education graduation requirements).

Pathways provide direction not tracking. Students should explore options and change pathways whenever they find one better suited to their strengths and interests.

■ Working within one or more career pathways, students can develop an educational plan. **Here is one example.**

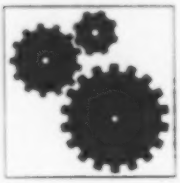
Career Goal — Child Life Specialists

Year 9:	**Year 10:**
Career & Personal Development	Nutrition & Foods or Teen Living
Applied Math I or Algebra I	Applied Math 2 or Algebra 2
Applied Biology & Chemistry	Biology
English 9	English 10
Social Studies	Sociology or Psychology
Elective	Reading & Speech
Year 11:	**Year 12:**
Parenting & Child Development	Occupations Child Care
Algebra II	Advanced Math
Adult Living	Principles of Technology/Chemistry
English 11	English 12 or Applied English
US History	Government
Family Health & Wellness	Cooperative Education

Plans Beyond High School -- Child Development course of study

Industrial & Engineering

Career Pathway



The Industrial and Engineering career pathway includes programs related to the technologies necessary to design, develop, install, or maintain physical systems. These may include engineering and related technologies, mechanics and repair, manufacturing technology, precision production, electronics, and construction.

Recommended courses for the Industrial and Engineering Pathway

- **Keyboarding/Introduction to Computers** - Recommended for all career pathways
- **English** - Technical Writing, Journalism
- **Math** - Applied Math 1 & 2, Algebra 2, or Algebra 1, Geometry, Algebra 2, Advanced Math Course
- **Science** - Applied Biology and Chemistry, Approved Agricultural Science Courses, Chemistry, Biology, Physics
- **Required Courses** - U.S. History, American Government, Economics, Humanities, Physical Education, Health, Speech, Reading
- **Family and Consumer Sciences** - Apparel & Housing, Career & Personal Development, Personal & Family Finance/ Consumer Economics, Food Science, Teen Living, Adult Living
- **Trade/Technical** - Principles of Technology, Automotive Technology, Building Trades, Electronics Technology, Drafting, Industrial Mechanics, Printing & Graphic Arts, Welding, Precision Machining
- **Technological Education** - Communications Technology, Power, Energy & Transportation Technology, Engineering and Design, Construction.Technology, Manufacturing Technology
- **Humanities** - Ceramics & Jewelry
- **Agriculture** - Small Gas Engines, Welding Technology
- **Business and Marketing** - Computers, Accounting, Business Law, Marketing
- **Work-based Learning** - Cooperative Education in Industrial or Engineering Fields, Apprenticeships

(The above courses are examples of what high schools might offer to students within pathways. This listing does not include all required courses. Students must complete all State Board of Education graduation requirements).

■ Working within one or more career pathways, students can develop an educational plan. **Here is one example.**

Career Goal — Electronics Technician

Year 9:	**Year 10:**
Introduction to Technology	Power/Energy & Transportation Tech
Applied Math I	Humanities Elective
Earth Science	Applied Math II
English I	Biology or Applied Biology/Chemistry
Reading & Speech	English II
Principles of Technology	
Year 11:	**Year 12:**
Chemistry	Electronics II Tech.
Algebra II	Intro to Electronic Drafting
English III	Work-based Learning
Intro. to Electronics Tech.	Calculus
US History	Technical Writing
Computer Aided Design	American Government

Plans Beyond High School -- Electronics course of study

Integration of academic and vocational education makes possible a career pathway connecting education with the world of work.

Pathways show students how education is an important part of preparing for life and work.

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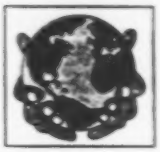
Natural Resources

Career Pathway



The Natural Resources career pathway includes programs related to the environment and natural resources. These may include agriculture, earth sciences, environmental sciences, fisheries management, forestry, horticulture, and wildlife management.

Recommended Courses for the Natural Resource Pathway

Career guidance is a key to helping students make informed choices about career pathways and which courses to select. The Dependable Strengths process will help students discover a pathway.

- **Keyboarding/Introduction to Computers** - Recommended for all career pathways
- **English** - Technical Writing, Journalism, Applied English
- **Math** - Applied Math 1 & 2, Algebra 2; or Algebra 1, Geometry, Algebra 2, Advanced Math Course
- **Science** - Applied Biology and Chemistry, Principles of Technology, Anatomy and Physiology, Approved Agriculture Courses
- **Required Courses** - U.S. History, American Government, Economics, Humanities, Physical Education, Health, Speech, Reading
- **Agriculture** - Horticulture, Landscaping, Agriculture Business and Leadership, Livestock Production, Natural Resources Conservation
- **Business/Marketing** - Computers, Accounting, Business Law, Financial Management, Marketing
- **Family and Consumer Sciences** - Parenting and Child Development, Food Service & Hospitality Management, Apparel and Housing, Food Science, Nutrition & Foods
- **Trade/Technical** - Drafting, Mechanics, Welding, Construction Technology
- **Work-based Learning** - Supervised Agricultural Experience Program

Pathways provide a mechanism to eliminate a low level general track that does not prepare students for further education or the world of work.

(The above courses are examples of what high schools might offer to students within pathways. This listing does not include all required courses. Students must complete all State Board of Education graduation requirements).

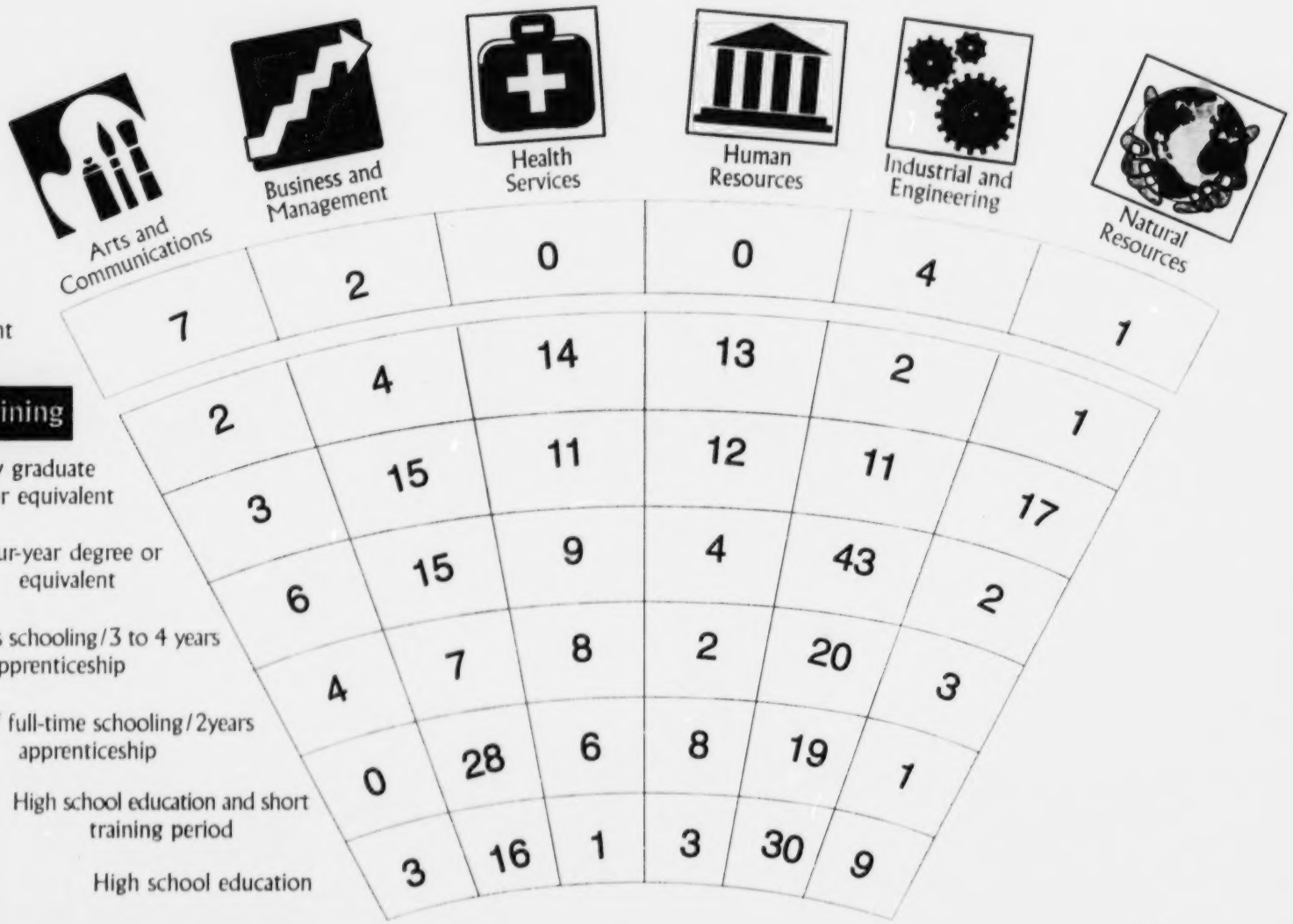
■ Working within one or more career pathways, students can develop an educational plan. **Here is one example.**

Career Goal — Wildlife Specialists

Year 9:	**Year 10:**
Intro to Agriculture Education	Botany/Plant and Soil Science
Personal Skill Development	Applied Math II
Applied Math I	Biology or Applied Biology/Chemistry
Earth Science	English II
English I	Humanities Elective
Reading & Speech	Health & Physical Education
Year 11:	**Year 12:**
Botany/Horticulture/Plant Science	Zoology/Fish & Wildlife Science
Algebra II	Principles of Technology
Biology	Applied English or English IV
English III	Humanities Elective
Humanities Elective	American Government
US History	Economics

Plans Beyond High School -- Natural Resources Curriculum

Numbers of CIS Occupations in Each Career Path


Arts and Communications
Business and Management
Health Services
Human Resources
Industrial and Engineering
Natural Resources
High Level of Talent or Experience
Education and Training
University graduate education or equivalent
Four-year degree or equivalent
2 to 3 years schooling/3 to 4 years apprenticeship
1 year of full-time schooling/2years apprenticeship
High school education and short training period
High school education
7 2 0 0 4 1
2 4 14 13 2 1
3 15 11 12 11 17
6 15 9 4 43 2
4 7 8 2 20 3
0 28 6 8 19 1
3 16 1 3 30 9

Career Information System
Occupation Titles

Arts and Communications

High school education:

Floral Designers
Handcrafters
Models

1 year of full-time schooling/2 years apprenticeship:

Free-lance Writers
Photographers
Film and Video Makers
Radio and Television Broadcasters

2 to 3 years schooling/3 to 4 years apprenticeship:

Writers and Editors
Interior Designers and Decorators
Clothes Designers and Patternmakers
Graphic Artists and Designers
Broadcast Technicians
Taxidermists

Four-year degree or equivalent:

Public Relations Workers
Technical Writers
Interpreters and Translators

University graduate education or equivalent:

Architects
Landscape Architects

High level of talent or experience required:

Fine Artists
Performing Artists
Musicians
Actors
Singers
Dancers
Professional Athletes

Business and Management

High school education:

Telephone Operators
Messengers
Collectors
Cashiers and Grocery Checkers
Freight Handlers
Stock Clerks
Newspaper Carriers
Packers and Wrappers
Grocery Baggers
Short Order Cooks
Bartenders
Waiters and Waitresses
Counter Attendants
Kitchen Helpers
Buspersons

High school education & short training period:

Restaurant Managers
Stenographers
Typists and Word Processors
General Office Clerks
Adjustment Clerks
Credit and Loan Clerks
Insurance Policy and Claims Clerks
Travel Agents
Ticket Agents
Library Assistants
Data Entry Operators
Office Machine Operators
Secretaries
Receptionists
Hotel Desk Clerks
Bookkeepers
Bank Tellers
Dispatchers
Shipping and Receiving Clerks
Mail Carriers
Postal Clerks
Sales Representatives
Automobile Salespeople
Business Services Salespeople
Route Salespeople
Retail Salespeople
Clothing Salespeople
Counter and Rental Clerks

1 year of full-time schooling/2 years apprenticeship:

Small Business Operators
Tax Preparers
Accounting and Statistical Clerks
Computer Operators
Insurance Agents
Real Estate Agents
Auto Parts Counter Workers
Chefs and Dinner Cooks

2 to 3 years schooling/3 to 4 years apprenticeship:

Hotel and Motel Managers
Construction Managers
Sales and Service Managers
Buyers and Purchasing Agents
Office Managers
Shorthand Reporters
Court Clerks
Medical Records Technicians
Legal Secretaries
Medical Secretaries
Cost Estimators
Appraisers
Loan Officers
Computer Programmers
Computer Support Specialists

Four-year degree or equivalent:

Property and Real Estate Managers
Public Administrators
Business Executives and Managers
Financial Managers
Military Officers
Recreation Directors
Management Analysts and Consultants
Personnel Managers

Association and Union Executives
Accountants and Auditors
Claims Adjusters and Examiners
Underwriters
Actuaries
Systems Analysts
Securities Salespeople

University graduate education or equivalent:

Health Services Administrators
Education Administrators
Market Research Analysts
Mathematicians and Statisticians

High level of talent or experience required:

Production Superintendents
Farmers and Ranchers

Health Services

High school education:

Animal Caretakers

High school education & short training period:

Health Technicians
Electroencephalograph Technicians
Electrocardiograph Technicians
Nursing Assistants
Psychiatric Aides
Home Health Aides

1 year of full-time schooling/2 years apprenticeship:

Phlebotomists
Opticians
Licensed Practical Nurses
Emergency Medical Technicians
Dental Assistants
Surgical Technologists
Medical Assistants

2 to 3 years schooling/3 to 4 years apprenticeship:

Medical Records Technicians
Medical Laboratory Workers
Dental Laboratory Technicians
Denturists
Radiologic Technologists
Respiratory Therapists
Registered Nurses
Funeral Directors and Embalmers
Massage Technicians

Four-year degree or equivalent:

Life Scientists
Biologists
Chemists
Physician Assistants
Occupational Therapists
Recreational Therapists
Physical Therapists
Dietitians
Dental Hygienists
Athletic Trainers
Registered Nurse
Sanitarians

University graduate education or equivalent:

Health Services Administrators
Physicians
Internists
Pediatricians
Surgeons
Obstetricians and Gynecologists
Psychiatrists
Chiropractors
Pharmacists
Speech Pathologists & Audiologists
Veterinarians
Optometrists
Dentists
Nurse Practitioners

Human Resources

High school education:

Social Service Aides
Recreation Attendants
Security Guards

High school education & short training period:

Library Assistants
Teacher Assistants
Child Care Workers
Law Enforcement Officers
Corrections Officers
Firefighters
Forest Firefighters
Military Enlisted Personnel

1 year of full-time schooling/2 years apprenticeship:

Preschool Teachers
Hair Stylists
Flight Attendants

2 to 3 years schooling/3 to 4 years apprenticeship:

Legal Assistants
Occupational Trainers
Recreation Leaders
Detectives and Investigators

Four-year degree or equivalent:

Public Administrators
Recreation Directors
Athletic Trainers
Social Workers
Parole and Probation Officers
Clergy
Elementary and Secondary Teachers
Special Education Teachers
Coaches
Librarians
Conservation Officers
Compliance Officers and Inspectors

University graduate education or equivalent:

Social Scientists
Sociologists
Geographers
Economists
Anthropologists
Market Research Analysts
Counselors
School Counselors

Lawyers
Psychologists
University and College Teachers
Educational Program Specialists
Archivists and Curators

Industrial and Engineering

High school education:

Service Station Attendants
Vehicle Cleaners
Room Cleaners
Janitors
Domestic Service Workers
Roofers
Construction Laborers
Insulation Installers
Food Processing Workers
Cannery and Frozen Food Workers
Textile Machine Operators
Sewing Machine Operators
Laundry and Dry Cleaning Workers
Upholsterers
Shoe Repairers
Log Handling Workers
Lumber Production Workers
Veneer and Plywood Workers
Lumber and Veneer Offbearers
Lumber and Plywood Mill Laborers
Pulp and Paper Workers
Woodworking Machine Operators
Petroleum Helpers
Metal Refining Workers
Foundry Workers
Forge Shop Workers
Electronics Assemblers
Production Painters and Finishers
Bus and Taxi Drivers
Fork Lift Operators

High school education & short training period:

Surveyor Helpers
Quality Control Inspectors
Small Engine Repairers
Pest Control Workers
Glaziers
Floor and Carpet Layers
Bakers
Rotary Drillers
Printing Production Workers
Petroleum Processors
Rubber and Chemical Processors
Rubber and Plastics Fabricators
Photofinishers
Production Assemblers
Aircraft Assemblers
Local Truck Drivers
Long Haul Truck Drivers
Deckhands
Airline Ground Crew Workers

1 year of full-time schooling/2 years apprenticeship:

Science Technicians
Farm Equipment Mechanics
Coin and Vending Machine Repairers
Telephone Installers and Repairers
Appliance Repairers
Building, Maintenance Workers
Painters and Paperhangers
Plasterers and Drywall Installers
Cement Masons
Carpenters
Meat Cutters
Lumber and Plywood Graders
Mine Workers
Saw Filers and Tool Sharpeners
Machine Tool Operators
Auto Body Repairers
Welders
Line Installers and Repairers
Water and Wastewater Plant Operators
Heavy Equipment Operators

2 to 3 years schooling/3 to 4 years apprenticeship:

Construction Managers
Engineering Technicians
Surveyors
Drafters
Cartogaphers
Automobile Technicians
Truck and Heavy Equipment Technicians
Aircraft Technicians
Millwrights
Heating and Cooling System Technicians
Solar Technicians
Computer & Office Machine Repairers
Radio and TV Service Technicians
Jewelers
Precision Instrument Repairers
Locksmiths
Bricklayers
Plumbers and Pipefitters
Tailors and Garment Fitters
Cabinetmakers
Compositors and Typesetters
Lithographic Workers
Printing Press Operators
Bookbinders and Bindery Workers
Metalworking Patternmakers
Molders
Tool and Die Makers
Machinists
Numerical Control Tool Programmers
Gunsmiths
Numerical Control Machine Operators
Ironworkers
Boilermakers
Shipfitters
Sheet Metal Workers
Electricians
Broadcast Technicians
Electronics Technicians
Electronics Testing Technicians
Laser Technicians
Stationary Engineers
Nuclear Power Technicians
Pilots and Flight Engineers

Four-year degree or equivalent:

Engineers
Aerospace Engineers
Chemical Engineers
Civil Engineers
Electrical Engineers
Industrial Engineers
Mechanical Engineers
Agricultural Engineers
Petroleum Engineers

Air Traffic Controllers
Construction & Building Inspectors

University graduate education or equivalent:

Mathematicians and Statisticians
Urban and Regional Planners

High level of talent or experience required:

Production Superintendents
Railroad Engineers
Railroad Conductors and Brakers
Ship Officers and Engineers

Natural Resources

High school education:

Forest Conservation Workers
Horticultural Workers
Groundskeepers and Gardeners
Farm and Ranch Hands
Seasonal Farm Laborers
Animal Caretakers
Commercial Fishers
Fallers and Buckers
Choker Setters

High school education & short training period:

Pest Control Workers

1 year of full-time schooling/2 years apprenticeship:

Science Technicians
Forestry Technicians
Water and Wastewater Plant Operators

2 to 3 years schooling/3 to 4 years apprenticeship:

Park Rangers
Fish and Wildlife Technicians

Four-year degree or equivalent:

Life Scientists
Biologists
Wildlife Biologists
Marine Biologists
Physical Scientists
Chemists
Physicists
Astronomers
Earth Scientists
Geologists
Meteorologists
Oceanographers
Hydrologists
Agricultural Scientists
Range Conservationists
Foresters
Conservation Officers

University graduate education or equivalent:

Landscape Architects

High level of talent or experience required:

Farmers and Ranchers
Water and Wastewater Plant Operators

By exploring a pathway, students see what education is required to achieve their career goal. Students set their educational sights higher when they see the opportunities that education offers them.

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Printed on recycled, recyclable paper 0196/2000/312